KAM-KOTIA MINES LIMITED

Part of Dickenson Group

ANNUAL REPORT 1968

KAM-KOTIA MINES LIMITED

DIRECTORS	A. W. WHITE, President - - - - - - - Toronto, Ontario
	D. F. BURT, Vice-President - - - - - - Toronto, Ontario Solicitor, Burt, Burt, Wolfe & Bowman
	G. W. WALKEY, General Manager - - - - Timmins, Ontario
	A. W. McDONALD, Retired - - - - - Maitland, Ontario
	J. D. BARRINGTON, Mining Engineer - - - - Toronto, Ontario
	J. J. WHITE, Stock Broker - - - - - Burlington, Ontario Brewis & White Limited
	J. GEDDES, Assistant Secretary - - - - Clarkson, Ontario
OFFICERS	A. W. WHITE - - - - - - - - - - - President
	D. F. BURT - - - - - - - - - - Vice-President
	H. R. HEARD - - - - - - - - Secretary-Treasurer
	J. GEDDES - - - - - - - - - Assistant Secretary
	G. W. WALKEY - - - - - - - - General Manager
COBALT REFINERY DIVISION	
Manager	J. N. CRAM
Refinery Office Address	R.R. #1, Cobalt, Ontario
WESTERN DIVISION	
Mine Manager	J. C. BLACK
Mine Office Address	New Denver, British Columbia
HEAD OFFICE	25 Adelaide St. West, Suite 416 - - - - Toronto, Ontario Telephone 362-4581
TIMMINS OFFICE ADDRESS	Box 290, Timmins, Ontario
TRANSFER AGENTS AND REGISTRAR	The Sterling Trusts Corporation - - - - - Toronto, Ontario Canadian Bank of Commerce Trust Company - New York, N.Y.
STOCK LISTED	Toronto and Canadian Stock Exchanges - - - - Symbol KKL
SOLICITORS	Burt, Burt, Wolfe & Bowman - - - - - Toronto, Ontario
AUDITORS	Thorne, Gunn, Helliwell & Christenson - - - Toronto, Ontario
BANKERS	Canadian Imperial Bank of Commerce
ANNUAL MEETING	Monday, May 26, 1969, at 2:00 p.m. (Toronto Time), Tudor Room, Royal York Hotel, Toronto, Ontario.

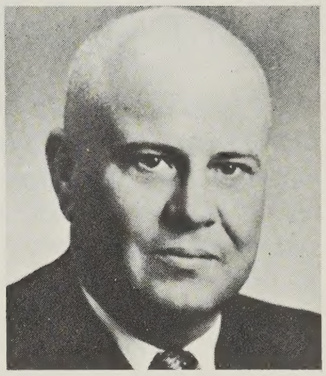
KAM-KOTIA MINES LIMITED

SUMMARY (in thousands of dollars)

	1968	1967	1966	1965	1964	1963	1962	1961
Metal recoveries	11,208	9,159	7,769	6,969	5,009	3,998	3,718	1,614
Depreciation and amortization	777	898	676	646	791	583	474	235
Income before income taxes	2,135	1,754	2,315	765	247	804	803	76
Income taxes	684	540	350	—	—	—	—	—
NET INCOME	1,451	1,214	1,965	765	247	804	803	76
Income per share	.34	.29	.46	.18	.07	.22	.22	.02
Dividends paid per share	.10	.20	.10	—	—	—	—	—
Shares issued at year-end	4,247,500	4,247,500	4,247,500	4,247,500	3,723,000	3,697,900	3,659,855	3,459,855
Production —								
Tons (thousands)	669	680	465	598	639	400	377	235
Grade of copper	1.37%	1.36%	1.67%	1.56%	1.26%	2.00%	1.95%	1.59%
Pounds of copper (thousands)	14,448	14,850	12,707	15,338	13,692	12,868	12,036	5,732
Grade of zinc	3.37%	1.78%	1.965%	1.39%	1.74%	—	—	—
Pounds of zinc (thousands)	25,897	11,377	8,734	5,840	2,523	—	—	—
Net working capital (or deficit) at year-end	2,769	1,834	1,798	955	(1,300)	(1,619)	(590)	(765)

KAM-KOTIA MINES LIMITED

President's Report to Shareholders



A. W. WHITE

Net income earned in 1968 was $1,450,763 (34¢ per share) compared to $1,243,886 (29¢ per share) in 1967.

The principal factors contributing to this improvement were

— a substantial increase in the grade and recovery of zinc, resulting in production of 25,897,000 pounds in 1968, compared to 11,377,000 pounds in 1967.

— notable improvement in operations of the Cobalt Refinery Division, which resulted in a profit of $350,389 in 1968, compared to $2,718 in 1967.

Copper production did not vary materially in the two years.

Major changes designed to provide greater milling capacity and better recovery were completed but not early enough to influence 1968 results. Benefits from them should become apparent in 1969.

More detailed information relative to operations at the mine appear in the report of Mr. G. W. Walkey, General Manager of the company.

Although the working capital position increased to $934,983 at December 31, 1968 from $35,735 at December 31, 1967, bank loans rose to $6,487,978 from $1,543,000 between these two dates. The increase in bank loans was accompanied by growth in the inventory of silver and other refinery products to $8,711,693 from $3,290,702. As greater refining capacity becomes available from expansion now in progress at the silver refinery, silver in inventory will be processed, sold, and indebtedness reduced substantially in 1969. All silver against which loans have been made is covered by forward sales, which protects both the loan and inventory valuation.

COBALT REFINERY DIVISION

The dramatic growth in the quantity, extent and diversity of operations started in 1967 at the Cobalt Refinery Division continued through 1968 when 12,785,000 ounces of silver were processed. Whereas uses of silver produced at the refinery in prior years were limited, Cobalt Refinery silver is now acceptable for delivery on the COMEX and London Metal Exchange.

The refinery has undertaken to start soon to process approximately 3,000,000 ounces of silver per month, principally from sources outside of Canada, under long-term arrangements.

In order to meet these commitments, extensive plant additions and alterations are now being made. Due to good progress, it is expected that the new facilities will be on line in the very near future. Some of the material to be processed had been accepted prior to the end of 1968 and was included in the inventory at the end of the year.

It is now evident that this division will be profitable to Kam-Kotia, consequently the management and staff at the Refinery are to be congratulated on their commendable performance.

As of January 31, 1969 General Appraisal Company, a division of Ritchie Developments Limited, appraised the depreciated value of the buildings, plant and equipment owned by Cobalt Refinery Division at $2,380,000. These assets are recorded in the books of the Division at a net depreciated cost of $617,000.

WESTERN OPERATIONS

On September 3, 1968, Kam-Kotia entered into an agreement with Silmonac Mines Limited, Burkam Mines Limited, and Burden Investors Services Inc. of New York, providing for the financing and performance of a program of exploration and development of the property owned by Silmonac Mines Limited in the Kootenay District of British Columbia. Pursuant to the agreement Kam-Kotia, and Burden through its wholly-owned subsidiary Burkam Mines Limited, have undertaken to spend, in equal proportions, up to $400,000 on or before September 1, 1972 in the exploration and development of the property. If the property is brought into production, Burden and Kam-Kotia are entitled to be reimbursed for their advances out of the first cash-flow, as defined in the agreement. Thereafter, profits are to be divided 51% to Kam-Kotia and Burden, and 49% to Silmonac.

Work is to be done by and under the supervision of Kam-Kotia personnel.

The first phase of the program of exploration and development is to consist of driving some 2,800 feet from the mouth of an adit to the target area. Work started in October, and by December 31 the drive had extended 540 feet. The target area should be reached early this summer. By December 31 Kam-Kotia and Burkam had each advanced $54,000 under this agreement.

Kam-Kotia owns 666,881 shares or 22.49% of the outstanding capital of Silmonac.

GENERAL

It has always been the policy of your company to seek ways and means to extend the life of your company, and increase its net earnings, consequently your directors consider it prudent to encourage exploration and development of mining properties in the immediate vicinity of, and where possible adjoining, Kam-Kotia.

During 1968 two important steps were taken by Kam-Kotia in this direction through agreements reached with Jameland Mines Limited and Cincinnati-Porcupine Mines Limited.

JAMELAND MINES LIMITED

After extensive study and negotiation, arrangements were completed for the financing of shaft-sinking and the development to production of the Jameland orebody. It was estimated that after May 1, 1968 a further $2,000,000 would be required to reach production, whereof $935,000 would cover the cost of surface construction and equipment and the remainder the cost of sinking the shaft to 1,300 feet, necessary lateral development, and stope preparation.

The Canadian Imperial Bank of Commerce agreed to lend to Jameland up to $1,000,000 for surface construction and the acquisition and installation of equipment on surface, providing Kam-Kotia and Dickenson would jointly guarantee repayment of funds borrowed by Jameland. In consideration of the guarantees, Jameland extended to Kam-

Kotia and Dickenson options to purchase a total of 400,000 shares of its capital at 60¢ per share, on or before October 15, 1971.

Jameland also entered into an agreement with Kam-Kotia whereby it would peform and pay for sinking of the shaft and underground development, and will receive shares of Jameland at 60¢ per share for its expenditures in this connection. It is estimated these expenditures will amount to approximately $1,000,000. Jameland has set aside 1,666,666 shares for this purpose.

To make available a sufficient number of shares to meet its commitments Jameland applied for and received Supplementary Letters Patent, increasing its authorized capital from 3,000,000 to 5,000,000 shares.

Construction, equipment acquisitions and installation were completed at Jameland in October and shaft sinking was started. By December 31 the shaft had reached a depth of 514 feet with the cutting of number 1 station completed. The shaft should reach its objective during the summer, 1969. The milling of Jameland ore in Kam-Kotia's mill is expected to begin early in 1970.

CINCINNATI-PORCUPINE MINES LIMITED

By agreement dated November 29, 1968 with Cincinnati-Porcupine Mines Limited, Kam-Kotia purchased 233,333 shares of Cincinnati for $35,000 and was authorized to perform such exploration, development and mining work on the Cincinnati property as it deems appropriate. Cincinnati agreed to issue shares of its capital for expenditures made by Kam-Kotia under this agreement as outlined in the notes to the financial statements. Estimated cost of the exploration is $460,000.

The proposed program consists of testing by diamond drilling from the surface certain electro-magnetic conductors located on the property, and to explore undergound by drifting from the Kam-Kotia 9th level (1,550 ft. horizon) with diamond drilling from the drift behind the face as the drift advances.

Work has started but it is too early to assess results.

OUTLOOK

The additions and revisions in the processing of ore at Kam-Kotia should improve recovery and efficiency. As mentioned previously, improvement in the operation of the Cobalt Refinery Division gives every indication of continuing, with substantial reductions in the company's debt position budgeted to take place in the near future. We feel these factors justify optimism as to the future of your company.

APPRECIATION

None of the options granted September 11, 1967 to certain of the employees of the company to purchase a total of 42,500 shares at $3.00 per share on or before December 27, 1968 were exercised as the market price of the stock during the term of the options did not warrant such action. The options lapsed on their termination date. In January, 1969 the directors of the company approved the granting of new options, expiring December 31, 1969, on the same number of shares at the same price.

We are pleased to advise you that effective March 15, 1969, Mr. H. V. Maxwell has been appointed Mine Manager.

On behalf of the directors and shareholders I wish to extend our appreciation to the employees of the company for their effective work and loyal support during the year.

Respectfully submitted on behalf of the Board,

A. W. WHITE,
President.

Toronto, Ontario,
April 4, 1969.

KAM-KOTIA

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Consolidated Balance Shee

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ASSETS

	1968	1967
Current Assets		
Cash	—	$ 155,887
Metal settlements outstanding and inventories of metals, concentrates and products in process at net realizable value (note 2)		
Copper and zinc	$ 2,590,226	2,362,290
Silver and other refinery products	8,711,693	3,290,702
Accounts receivable	392,032	180,974
	11,693,951	5,989,853
Investments in Other Companies		
471,009 shares Dickenson Mines Limited at cost (quoted market value 1968 — $1,601,431; 1967 —$1,530,779)	1,504,633	1,504,633
Other listed shares at cost (quoted market value, 1968 — $190,341; 1967 — $336,529)	268,083	462,182
730,843 (1967 — 680,000) shares Jameland Mines Limited, at cost (note 3)	330,343	299,837
Expenditures for which 261,203 shares of Jameland Mines Limited are to be received (note 3)	156,722	—
Interest in non-consolidated subsidiary companies at cost less amounts written off and allowance for decline in value (note 1)	129,956	112,180
Other shares, bonds, advances and participations at cost less amounts written off and allowance for decline in value	720,853	638,863
	3,110,590	3,017,695
Fixed Assets		
Buildings, machinery and equipment at cost	6,992,854	6,055,403
Less accumulated depreciation	4,143,113	3,532,657
	2,849,741	2,522,746
Mining properties at cost	667,505	667,505
Land at cost	7,555	7,555
	3,524,801	3,197,806
Other Assets and Deferred Charges		
Supplies at average cost	368,077	356,087
Prepaid expenses and deposits	166,071	244,847
Special refundable tax	108,775	92,299
Shaft sinking and development expenditures, less amortization	252,216	525,766
	895,139	1,218,999
	$19,224,481	$13,424,353

AUDITOR

To the Shareholders of
Kam-Kotia Mines Limited

We have examined the consolidated balance sheet of Kam-Kotia Mines Limited and its consolidated subsidiary companies as at December 31, 1968 and the consolidated statements of income, retained earnings and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

Toronto, Canada
March 5, 1969

MINES LIMITED

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ıbsidiary companies

-December 31, 1968

t December 31, 1967)

LIABILITIES

	1968	1967
Current Liabilities		
Bank loans, secured (note 4)	$ 6,487,978	$1,543,000
Refinery settlements payable to shippers of concentrates and metallics	1,183,091	1,272,827
Other accounts payable and accrued liabilities	675,526	569,797
Taxes payable	578,171	770,027
	8,924,766	4,155,651
Deferred Income Taxes (note 7)	195,000	190,000
Shareholders' Equity		
Capital stock (note 5)		
Authorized — 5,000,000 shares of $1 each		
Issued — 4,247,500 shares	4,247,500	4,247,500
Deduct discount less premium	432,680	432,680
	3,814,820	3,814,820
Retained earnings	6,289,895	5,263,882
	10,104,715	9,078,702
	$19,224,481	$13,424,353

Approved by the Board:

A. W. WHITE, Director.

JAMES GEDDES, Director.

EPORT

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1968 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year, after giving effect in that year to the change in accounting for income taxes as set out in note 7, with which we concur.

THORNE, GUNN, HELLIWELL & CHRISTENSON
Chartered Accountants

KAM-KOTIA MINES LIMITED

and its consolidated subsidiary companies

Consolidated Statement of Income

Year ended December 31, 1968

(with comparative figures for 1967)

	1968		1967
Mining			
Revenue			
Metal recovery, gross value	$11,208,131		$9,158,519
Deduct transportation and treatment costs	4,115,480		2,560,056
		$7,092,651	6,598,463
Expenses			
Development and mining	2,293,496		2,149,961
Milling	1,076,025		973,824
Mine management, office and general property expenses	683,769		546,846
Ontario mining tax	161,500		153,000
Head office administrative and general expenses	197,684		229,627
Interest expense	—		4,286
		4,412,474	4,057,544
Operating income before depreciation and amortization		2,680,177	2,540,919
Deduct			
Depreciation (note 6)	503,274		576,327
Amortization of shaft sinking and development expenditures (note 6)	273,550		322,083
		776,824	898,410
Operating income — mining		1,903,353	1,642,509
Refinery Income			
Income from operation of refinery, after expenses which include depreciation of $130,638 (1967 — 114,118)		350,389	2,718
		2,253,742	1,645,227
Other Deductions			
Allowance for decline in value of other shares	125,000		
Outside exploration expenditures written off	27,156		1,378
		152,156	1,378
		2,101,586	1,643,849
Investment Income			
Dividends from Dickenson Mines Limited	23,550		47,101
Other dividends, interest and royalties	12,261		23,100
Profit (loss) on sale of shares	(2,234)		39,836
		33,577	110,037
Income before income taxes		2,135,163	1,753,886
Income taxes			
Current	679,400		540,000
Deferred (note 7)	5,000		(30,000)
		684,400	510,000
Net Income for the year		$1,450,763	$1,243,886

KAM-KOTIA MINES LIMITED

and its consolidated subsidiary companies

Consolidated Statement of Retained Earnings

Year ended December 31, 1968

(with comparative figures for 1967)

	1968	1967
Balance at beginning of year		
As previously reported	$5,453,882	$5,089,496
Deferred income taxes (note 7)	190,000	220,000
As restated	5,263,882	4,869,496
Net income for the year	1,450,763	1,243,886
	6,714,645	6,113,382
Deduct dividends—10¢ per share (1967—20¢ per share)	424,750	849,500
Balance at end of year	$6,289,895	$5,263,882

Operation of Refinery

Year ended December 31, 1968

(with comparative figures for 1967)

	1968		1967
Sales of metals and products		$10,854,569	$6,132,335
Cost of Sales			
Inventory at beginning of year	$ 2,022,436		1,671,216
Purchases of concentrates and metallics	16,172,005		5,796,888
Direct costs of processing and refining	484,846		366,048
	18,679,287		7,834,152
Less inventory at end of year	8,711,693		2,022,436
		9,967,594	5,811,716
		886,975	320,619
Expenses			
Refinery management, office and general expenses	165,595		94,373
Head office administrative and general expenses	10,891		10,291
Shipping and marketing expense	72,095		75,923
Interest expense (after deduction of interest earned on advances to silver shippers 1968 — $63,024; 1967 — $17,807)	157,367		23,196
		405,948	203,783
Operating income before depreciation		481,027	116,836
Depreciation		130,638	114,118
Income for the year before income taxes		$ 350,389	$ 2,718

KAM-KOTIA MINES LIMITED

and its consolidated subsidiary companies

Consolidated Statement of Source and Application of Funds

Year ended December 31, 1968

(with comparative figures for 1967)

	1968	1967
Source of Funds		
Operations		
Net income for the year	$1,450,763	$1,243,886
Items not requiring current outlay (receipt) of funds		
Depreciation and amortization	907,462	1,012,528
Allowance for decline in value of other shares	125,000	—
Deferred income taxes	5,000	(30,000)
	2,488,225	2,226,414
Refund of power line deposit	81,726	—
	2,569,951	2,226,414
Application of Funds		
Additions to buildings, machinery and equipment (net)	960,907	849,729
Shaft sinking and development expenditures	—	17,293
Investment in shares of and advances to other companies (net)	217,895	434,422
Special refundable tax	16,476	9,299
Dividends	424,750	849,500
Other applications (net)	14,940	30,436
	1,634,968	2,190,679
Increase in working capital	934,983	35,735
Working capital at beginning of year	1,834,202	1,798,467
Working capital at end of year	$2,769,185	$1,834,202

Notes to Consolidated Financial Statements

December 31, 1968

1. SUBSIDIARY COMPANIES

The consolidated financial statements include the accounts of the wholly owned subsidiary companies, Deebank Limited and Cobalt Refinery Limited.

The non-consolidated subsidiary companies have been excluded from the consolidation as they are dormant or are developing their properties and their expenditures since acquisition of control have been deferred to future operations, except for certain write-offs, security profits and custom milling losses, carried direct to deficit. The proportion of the net amount so charged to deficit attributable to the shares held by Kam-Kotia Mines Limited in such subsidiary companies for their fiscal years ended in 1968 amounts to $14,000 (1967 — $17,000) and for the period since acquisition of the shares amounts to $378,000 which is substantially less than the amounts written off in respect of the investment in such subsidiary companies.

2. METAL PRICES

In computing the net realizable value of metal settlements outstanding and inventories of metals, concentrates and products in process at December 31, 1968

(a) Copper has been valued at 48.10¢ per pound less treatment charges of 8.35¢ per pound, and

(b) silver and other products in process have been valued at net selling prices, less costs to finish the products in process.

3. JAMELAND MINES LIMITED

Pursuant to an agreement dated October 15, 1968 with Jameland Mines Limited —

(a) Kam-Kotia has agreed to expend up to $1,000,000 on a program of exploration and development of the Jameland property, and is to receive 1 share of Jameland for every 60¢ expended. Expenditures in 1968 amounted to $187,228 for which 50,843 shares of Jameland were received and 261,203 shares are to be received.

(b) Kam-Kotia and Dickenson Mines Limited have jointly guaranteed the bank loans of Jameland.

As consideration for the guarantee, Jameland has granted to Kam-Kotia and Dickenson an option to purchase up to 400,000 shares of Jameland at 60¢ per share exercisable on or before October 15, 1971. At December 31, 1968 the bank loans of Jameland amounted to $788,000.

Subsequent to the date of the balance sheet, Kam-Kotia sold 200,000 shares of Jameland for $117,680.

4. SECURITY FOR BANK LOAN

The bank loan is secured by 465,009 shares of Dickenson Mines Limited, metal settlements outstanding, and inventories of metals, concentrates and products in process.

5. CAPITAL STOCK

Subequent to the date of the balance sheet, options to purchase 42,500 shares of the company's capital stock was granted to certain employees at $3.00 per share expiring on December 31, 1969. These options replaced similar options granted in 1967 which expired on December 27, 1968.

6. DEPRECIATION AND AMORTIZATION

Depreciation and amortization have been recorded on the straight line method at annual rates as follows:

Kam-Kotia Property	
Buildings, machinery and equipment	15%
Shaft sinking and underground development expenditures	25% and 33⅓%
Refinery	
Buildings, machinery and equipment	10%

7. INCOME TAXES

Depreciation and amortization are provided in the accounts in accordance with the company's regular practice. However, deductions for tax purposes in respect of these costs exceed amounts charged to income in the accounts and, as a result, income taxes payable are reduced. Prior to 1968 such reductions were reflected in the year the claims for tax purposes were made. In 1968 the tax allocation method has been adopted, whereby the income taxes charged in the accounts reflect the full amount of taxes applicable to the income included in the statement of income and the tax reductions are shown in the balance sheet as deferred income taxes.

For purposes of comparison, 1967 figures have been restated to show income taxes charged to income on the tax allocation basis. In addition retained earnings at the beginning of each year have been restated to reflect deferred income taxes arising in prior years.

8. REMUNERATION OF DIRECTORS AND SENIOR OFFICERS

Direct remuneration of the company's directors and senior officers (including the five highest paid employees as required by the Ontario Corporations Act) amounted to $86,280 in 1968 and $81,370 in 1967.

KAM-KOTIA MINES LIMITED

and its consolidated subsidiary companies

Interest in Non-Consolidated Subsidiary Companies

December 31, 1968

Shares:

1,040,000	Camarillo Oils Ltd. (including 300,000 shares in escrow).
1,614,968	Carnegie Mining Corporation Ltd.
1,141,322	Glencair Mining Co. Ltd. (including 420,000 shares in escrow).
640,000	Kamisfair Mines Ltd. (including 576,000 shares in escrow).
680,710	Lithia Mines & Chemicals Ltd. (including 337,500 shares in escrow).
1,180,000	Lone Bachelor Mines Ltd. (including 675,000 shares in escrow).

Listed and Other Shares

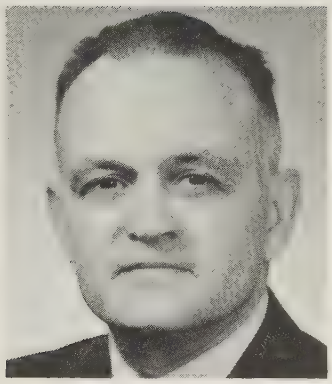
December 31, 1968

Shares:

586,250	Abino Gold Mines Ltd. (including 5,000 shares in escrow).
488,667	Amalgamated Rare Earth Mines Ltd.
233,333	Cincinnati-Porcupine Mines Limited.
704,417	Consolidated Golden Arrow Mines Ltd. (including 45,000 shares in escrow).
471,009	Dickenson Mines Limited (see balance sheet).
330,000	Gateway Uranium Mines Ltd. (including 202,298 shares in escrow).
604,000	Inore Gold Mines Ltd.
730,843	Jameland Mines Ltd. (see balance sheet).
470,000	Mareast Explorations Limited.
174,000	Nickel Rim Mines Ltd.
961,549	Pleno Mines Ltd.
666,881	Silmonac Mines Ltd. (including 583,331 shares in escrow).
1,186,460	United Macfie Mines Ltd. (including 77,780 shares in escrow).

KAM-KOTIA MINES LIMITED

General Manager's Report



G. W. WALKEY

Mr. A. W. White, President,
Kam-Kotia Mines Limited,
Suite 416,
25 Adelaide St. W.,
Toronto 1, Ontario.

Dear Sir:

My report covering operations of the Timmins' area mine for the year ending December 31, 1968 is submitted hereunder.

PRODUCTION AND MILLING

Milling was carried out continuously through the year at maximum capacity, except for down time required to make changes and install new equipment in the milling plant. Operating time was 96.5% of total hours for the year. Daily treatment rate averaged 1,837.0 tons per day with the rate climbing to about 2,100 tons per day for the last two months. All mill feed was supplied from underground operations and, about 59,500 tons of mine production was stockpiled on surface.

Mill heads were 1.26% copper and 2.82% zinc for the first six months and climbed to 1.48% copper and 3.93% zinc for the last six months. Copper recovery and concentrate grade were off from previous years, but zinc recovery increased substantially.

Major changes were made in the mill during the year as well as in the crushing plant. A 5½ ft. Symons standard cone crusher was installed in June and this allowed three stage crushing and increased crushing capacity. The grinding section was completely rebuilt and two 12 x 14 ft. ball mills replaced four small ball mills. This change provided grinding capacity of about 2,700 tons per day at 75% minus 325 mesh. Major circuit changes were made in the flotation section and, additional flotation cells will be installed in 1969 plus additional pumps and thickening capacity, to provide capacity equal to the grinding circuit.

PRODUCTION DATA

	1968	1961 to 1968
Copper		
Dry tons milled	669,404	4,072,427
Average tons per day	1,837.0	1,491.0
Mill heads % Copper	1.372	1.554
Copper concentrate, dry tons	40,856.0	270,417.2
Copper concentrate grade	18.686	19.55
Pounds returnable copper	14,448,247	101,867,540
Copper recovery %	83.1	84.9
Smelter settlements outstanding at Dec. 31, 1968		
Pounds of copper	5,520,347.6	
Zinc		**1964 to 1968 only**
Dry tons milled	665,889	2,486,823
Zinc mill heads %	3.37	2.10
Zinc concentrate tons	31,752.7	67,490.9
Zinc concentrate grade %	49.35	49.05
Zinc recovery %	70.0	63.4
Ounces gold paid for	910.5	3,210.1
Ounces silver paid	102,994	397,660

MILLING DATA

Grinding Steel Consumption

Balls	2.31 lb/ton
Rods	1.05 lb/ton
Total	3.36 lb/ton

Reagent Consumption	Lb/Ton Milled
Hydrated Lime	4.681
Zanthates	0.468
Sodium cyanide	0.045
Frothers	0.173
Zinc sulphate	0.241
Copper sulphate	0.739
Total Cost per Ton	39.16 cents

MINING OPERATIONS

Underground operations supplied all the mill feed plus 59,500 tons of ore which was stockpiled on surface.

Surface stockpiles contained the following tonnages at the end of the year:—

Zinc ore	17,722 tons 3.30% Zinc
Low grade copper ore from pit operations	87,340 tons 0.80% Copper & 2.0% Zinc
Crusher stockpile	148,490 tons 1.32% Copper & 3.0% Zinc

UNDERGROUND PRODUCTION

Total tonnage hoisted was 788,533 tons consisting of 731,533 tons of ore and 57,000 tons of waste. The surplus over tonnage milled was stockpiled. Stopes above the 5th level provided 229,825 tons and, production from below the 5th level was 501,708 tons. In 1969, about 80% of production will come from stopes below the 5th level and the mine will be capable of supplying the tonnage to maintain mill rate of 2,200 tons per day.

Broken and drilled-off tonnage at the end of 1968 was 138,000 tons.

DEVELOPMENT

Development expense continued to be heavy and total development footage was only slightly below the footage for 1967. About 85% of development was on the levels below the 5th level, and the emphasis was on developing the large ore blocks for production, with the secondary objective to develop diamond drill bases for exploration to depth and, down the plunge to the west. Only a few small zones remain to be developed above the 5th level, although there are several potential zones that require testing and exploration. At the end of the year the main development base was the 9th level with two headings being advanced to the west as drill bases.

Stope development of the B4, B5, B6 and C9 blocks was 75% completed and blast hole muck will account for 90% of production in 1969.

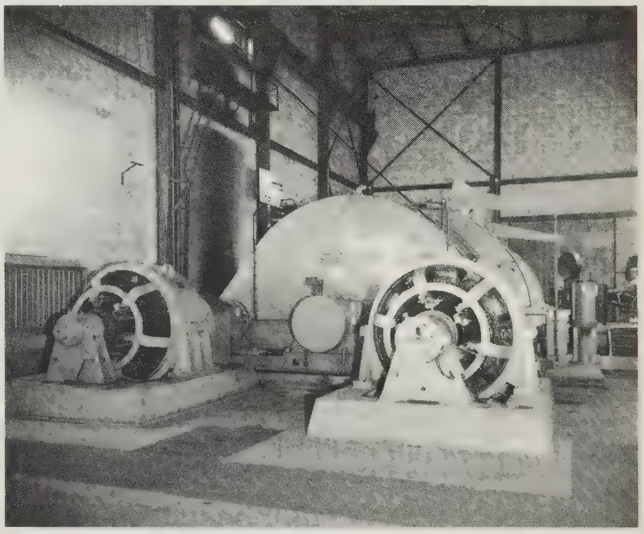
Total development footage, drifting and x-cutting was 10,191.0 ft. distributed as follows:

#1 Level	134.0 ft.
#2 "	83.0 ft.
#3 "	317.0 ft.
#4 "	767.0 ft.
#5 "	452.0 ft.
#6 "	1,255.0 ft.
#7 "	876.0 ft.
#8 "	3,137.0 ft.
#9 "	3,164.0 ft.

Total raise footage was 3,706.0 ft., almost all for stope development.

MINE HOISTING AND UNDERGROUND CRUSHING

The 12 ft. by 84 inch hoist installed in late 1968 performed very well and provided more than adequate capacity. Maximum monthly hoist was 75,400 tons, but monthly capacity of the hoist at current depth is at least 120,000 tons per month.



Kam-Kotia's 12-ft. diameter hoist is driven by two 1,000-h.p. motors.

The 36 x 48 inch jaw crusher performed very well, and, maintenance on loading pockets, skips, ore bins, etc. was greatly decreased. The increased storage capacity in ore passes, ore bins, and, as broken rock in stopes smoothed out the flow of ore to the mill bins, all of which improved work scheduling by eliminating overtime work.

EXPLORATION

Underground exploratory diamond drilling was carried on continuously during the year and total footage drilled was 87,864.0 ft. Of this footage, 63,873 ft. were for primary and detail exploration and 23,991 ft. was definition type drilling to establish mining layouts and for grade control. A total of 10 holes, comprising 5,873.0 ft. were also drilled from surface to test possible targets and this drilling was not productive.

Underground exploration was concentrated on the levels below the 5th level, and, west from the shaft, primarily in the block bounded by a large N/S striking dike on the west. Some drilling was done below the 9th level in this block but more testing is required. The 904 drift was driven through the dike and about 600 ft. west of the dike as a drill base and some drilling has been completed from this base with encouraging results. A second drill base is being established to allow for cross sectional drilling of the favourable rocks west of the dike. The block of ground lying east of the shaft was tested from the 800 level to about 1,000 ft. east of the shaft. Exploration above the 5th level was limited to following up previously indicated zones and looking for extensions of known ore bodies.

The program added several small ore zones and added to the size of known ore bodies, but no new major ore bodies were developed. In 1969, the emphasis will be on exploration west of the dike, both above and below the 9th level, using the 9th level as a drill base.

ORE RESERVES

Positive and broken ore reserves were not maintained during 1968. Ore reserves, including dilution, are estimated as follows as at December 31, 1968.

Positive and Broken Ore

1. 1,465,000 tons grading 1.25% copper and 4.0% zinc in the mine.
2. 254,000 tons grading 1.19% copper and 2.90% zinc in stockpile on surface.
3. 400,000 tons grading 0.40% copper and 4.6% zinc in place in the mine.

Probable Ore

100,000 tons grading 1.25% copper.

Possible Ore (Drill indicated only)

250,000 tons grading 1.5% copper.

OTHER EXPLORATIONS AND DEVELOPMENT

JAMELAND MINES

Kam-Kotia's staff continued to direct Jameland's operations. Surface diamond drilling was continued until June and a total footage of 15,874 ft. was completed. Drilling was suspended as the target areas were getting deeper and further exploration can be carried out from underground openings as they become available, more efficiently and at lower cost. On the basis of all the drill hole results, ore reserves are estimated as follows, including dilution factor.

Jameland Mines' efficient surface plant features a 120-ft. steel headframe with a separate hoist and compressor building.

Probable Ore — Jameland

Copper Ore — 432,000 tons grading 1.96% copper.

Copper — Zinc Ore — 170,000 tons grading 1.06% copper and 7.12% zinc.

The above tonnage also contains minor amounts of precious metals, i.e. gold and silver, with an estimated recoverable value of between 30 and 40 cents per ton.

Indicated and Possible

300,000 tons grading 1.5% copper and 4.0% zinc.

All the above reserves are in the block of ground down to 900 ft. below surface.

Plant Construction and Shaft Sinking

Construction of the permanent mining plant began in May and was completed in October. The plant consists of Hoistroom housing the 10 ft. hoist, compressor plant and switchroom, and a head frame complex containing ore and waste bins, shaft house and service building. The buildings are steel frame, with concrete block walls and steel sheathing. The cost of plant construction was within the budget estimate.

Shaft sinking was started at the end of October, and by December 31st, the shaft had been sunk 514.0 ft. and No. 1 station was completed. Shaft sinking should be completed by the end of May, 1969 at which time underground development will begin. It is expected that milling Jameland ore will be done in Kam-Kotia's mill and mill feed should be available early in 1970.

PLENO MINES

No work was done on the Pleno property in 1968 and none is currently planned for 1969. Some surface drilling was done on Jameland Mines adjacent to Pleno but results were inconclusive.

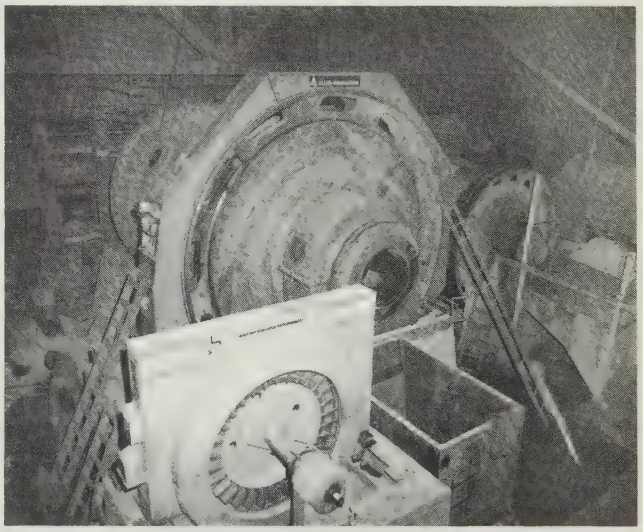
CINCINNATI PORCUPINE MINES

In November, an agreement was reached with Cincinnati Porcupine Mines, covering 89 claims controlled by Cincinnati, located in Robb Township west of Kam-Kotia's property, whereby Kam-Kotia has the right to explore and develop this property and mine and mill any ore developed as a result of this work. All available data on this property is being studied and an exploration program is being developed by Kam-Kotia staff. The program for 1969 will include surface diamond drilling, underground development from Kam-Kotia's levels and underground diamond drilling, and actual work will start in January, 1969.

CAPITAL EXPENDITURES

Buildings

1. The No. 1 hoist building was converted to facilities housing main office, engineering and geological offices, mine department offices, and dry and change house for underground personnel.
2. The original mine change house was converted to use as plant department offices and electrical shop.
3. The original main office was converted to additional warehouse space.
4. A 14 ft. by 50 ft. concrete block building was built to house switching facilities for power supply to the new 12 x 14 ft. ball mills.
5. The zinc concentrate storage pad at rail siding was enlarged and improved to facilitate box car loading.



The second of two new 12-ft. by 14-ft. grinding units during installation at Kam-Kotia Mines. The first mill started up in October.

Equipment

The following equipment was installed in 1968 and placed in service:—

1 — 5½ ft. Symons standard cone crusher, replacing the 36 x 48 inch Traylor jaw crusher.

1 — 5000 K.W. substation, 27.6 — 2.4 K.V. complete with switching equipment.

2 — 12 x 14 ft. C.A.C. ball mills, driven by 1250 H.P. Synchronous motors.

2 — 8 x 6 SRL pumps.

2 — 8 x 10 SRL pumps.

4 — 6 x 6 SRL pumps.

6 — 15 inch cyclones.

6 — 10 inch cyclones.

1 — 4.5 ton Clayton battery locomotive.

1 — 1969 1-ton pick up truck.

The total cost of buildings and equipment in 1968 was $685,900.

PERSONNEL RELATIONS AND LABOUR FORCE

Total force was as follows:—

	December 31, 1968	December 31, 1967
Staff	48	50
Crew	252	275
Total	300	325

The work force reached a peak of 356 in July, and then reduced to a total of 300 at the end of the year as construction projects were completed. About six men of the total force are working on the Jameland project. The work force was relatively stable in 1968 and there was only minor turnover in the mine force. A total of 39 students were employed during the summer months, in the mine, mill, on construction, and in the engineering and geological departments. The majority of the students were local boys.

Employee and Union relations were excellent during the year and it is expected that these conditions will continue. Little change is expected in the work force for 1969, and the current labour contract is effective until December 31st, 1969.

ACKNOWLEDGMENT

I once again record my appreciation and thanks to the staff and crew who are responsible for the progress and achievements that have been made in 1968.

The guidance and support of the President and other directors which has always been available is also gratefully acknowledged.

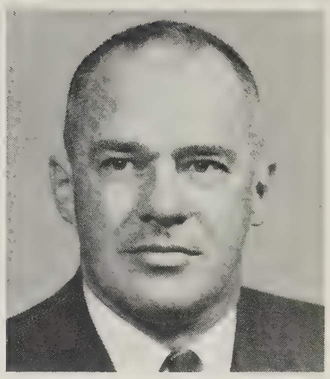
Respectfully submitted

G. W. WALKEY,

February 4, 1969. General Manager.

KAM-KOTIA MINES LIMITED

Cobalt Refinery Division



JOHN N. CRAM

The President and Directors,
Kam-Kotia Mines Limited.

We present our report on operations of the Smelter and Refinery Division for the year ending December 31, 1968.

1968 operations showed a creditable profit and can be expected to continue to do so.

After several years of experimenting to establish more efficient techniques, and the recruitment of competent staff, negotiations were commenced to obtain additional feeds from sources other than the local mines. Results have been gratifying.

The previous market, the Royal Canadian Mint, was lost due to the cessation of minting silver coinage. In anticipation of, and in planning for this eventuality, alternate outlets through Canadian and U.S.A. users of fine silver were located. Our silver was accepted in both London and New York for "good delivery" by the London Bullion Dealers and The New York Commodity Exchange, Inc. Our universally accepted mark is listed as "CRK".

Approaches for feeds throughout the U.S.A. and other countries were commenced during the nonferrous strike, in the United States in 1967. Business arrangements were made with many new shippers. After cessation of the strike, several of the large consumers who had apparently gained confidence in our ability to produce a high quality silver with prompt deliveries and on competitive terms, continued to do business with this company. Shipments have also continued since cessation of the strike, and many offers of materials had to be turned down for lack of refining capacity.

Through a special loan fund set up with the Canadian Imperial Bank of Commerce, negotiations to purchase silver for forward sales were possible. As of December 31, 1968, 1,857,784 ounces of silver were in storage in Toronto Bank vaults, against which the company had borrowed $3,218,000. All of this silver is covered by forward sales contracts and it is expected the loan will be fully liquidated by mid-summer of 1969.

The plant's silver refining capacity was, until last spring, limited to some 350,000 to 500,000 ounces of fine silver per month. A first stage expansion of the fire refining facilities was commenced in June, completed and on line by September 15, 1968. It now provides refining capacity for 900,000 ounces per month of 9995 fine silver.

A second stage of fire refining capacity expansion is well advanced and should be on initial test runs during April, 1969. When fully completed and on line, it will provide for 3 to 3½ million ounces of fine silver production per month, and will also allow for upgrading of the smelter "speiss" with resultant less tie-up of silver and higher cobalt-nickel (pay metal) content, thereby resulting in an improved return.

No operations were carried out in the Cobalt Plant. All speiss has been shipped to Belgium for treatment with the deliverable silver sold on the London market. A new contract with the Belgians, on improved terms, was negotiated during 1968 and extends to the end of 1969. Development studies

and limited maintenance and alterations were carried out in the Cobalt Plant. With the new converter furnace and other proposed process changes, it is expected that we will be able to process all our own speiss for production of cobalt and nickel oxides by 1970, with a resultant credit to the operation and at the same time recover all the silver ourselves. This will result in added income. At present the silver expansion programme is of higher priority. An enlarged and improved silver vault was constructed which provides better security. Added covered storage for fluxes, etc., was also provided.

The existing electrolytic silver refinery was expanded from 12 cells to 20 cells and improved physical facilities were added. Production from this circuit reached 250,000 ounces in December, 1968. A start was made last fall towards a further expansion of the electrolytic refining circuit. This project is awaiting spring and completion of other higher priority projects but should be completed during the summer of 1969. It will then provide for production of 1,000,000 ounces per month of top quality fine (9999) silver. This will ensure holding and gaining more of the higher grade market. In addition, it will allow us to purchase silver bearing materials containing appreciable quantities of gold and other precious metals for recovery.

During 1968, custom treatment of high gold/silver residues from the Hollinger Mine at Timmins clean-up and mine-mill precipitates from their Ross Mine, were commenced and are continuing.

The new Roaster dust collection system installed in 1967 has made the arsenic refinery unnecessary and obsolete for existing operations. The arsenic trioxide is now collected in saleable form directly from the roaster. The backlog of crude arsenic was refined and sold and the contained values recovered. The small arsenic refinery was torn down to recover contained silver values. Arsenic is no longer a cost against the silver and contributes to the overall operation. As an added and very important advantage it has resulted in improved working conditions due to reduction of arsenic burns.

PRODUCTION DATA	1968	1967
Tons of mine concentrates treated	2,154	1,652
Smelter Ran — Days	332	285
Roaster Ran — Days	234	177
Silver Refinery Ran — Days (Fire)	363	236
Arsenic Refinery Ran — Days	49	88
Electrolytic Silver Ran — Days	232	122
Speiss Production — Tons	551	689
Silver Production Ounces:		
— Owned	5,362,473	3,501,621
— Custom Toll	7,423,048	103,730
Total	12,785,521	3,605,351
Arsenic Trioxide:		
— Lbs.	673,839	706,435
— Net gain (loss) on production costs	$ 11,726	$ (2,930)
Gold Bullion:		
— Ounces Gold	8,206	Nil
— Ounces Silver	16,415	Nil

Minor amounts of bismuth, copper, lead and gold were again recovered and sold in slag to Noranda or base bullion in Germany. Income was credited to silver.

During 1968 one additional Professional Engineer (qualified in Chemical and Mining) and nine technical graduates from the Northern Colleges were added to our staff. The year started with a total of 34 employees and ended with 82.

The Welding and Safety Division showed a profit of $16,174.

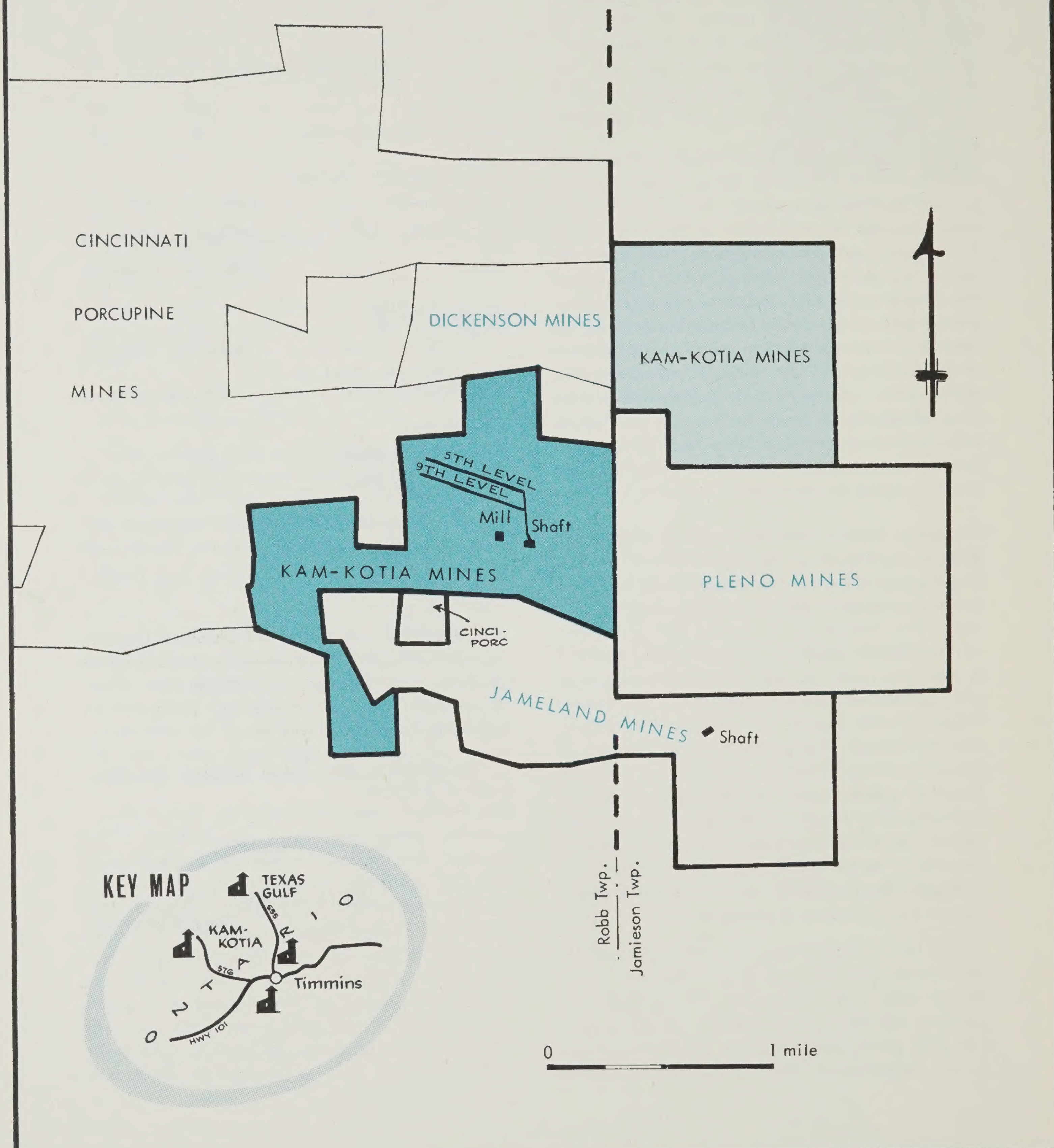
Respectfully submitted,

JOHN N. CRAM, P.Eng.,
General Manager.

Location Map

KAM·KOTIA MINES LIMITED

KAMISKOTIA - TIMMINS MINING AREA. ONTARIO.



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